CLAIMS:

1. A method of determination of optical properties of a device under test in both directions in transmission and in reflection, comprising the steps of:

distinguishable coding at least two parts of a provided measurement signal,

feeding the at least two parts into the device under test from both directions,

receiving the signals from both directions transmitted and reflected by the device under test,

identifying at least the coded parts in the signals transmitted and reflected by the device under test,

analyzing at least the identified parts to determine at least one optical property of the device under test from both directions in transmission and in reflection.

2. The method of claim 1, further comprising the steps of:

coding the at least two parts of the measurement signal by time coding the measurement signal into at least two parts.

3. The method of claim 2, further comprising the steps of:

time coding the at least two parts of the measurement signal by sequentially feeding one part of the measurement signal into a first path entering the device under test from one direction and the other part of the measurement signal into a second path entering the device under test from the other direction.

4. The method of claim 3, further comprising the steps of:

sequentially feeding one part of the measurement signal into the first and the other part of the measurement signal into the second path by using a switch.

5. The method of claim 1, further comprising the steps of:

coding the at least two parts of the measurement signal by spectral coding the measurement signal into at least two parts.

6. The method of claim 5, further comprising the steps of:

spectral coding the at least two parts of the measurement signal by splitting the measurement signal into at least two parts and modulating the at least two parts with different frequency or amplitude modulations.

7. The method of claim 1, further comprising the steps of:

providing a reference signal for the signal transmitted by the device under test and/or providing a reference signal for the signal reflected by the device under test, for at least one of both directions,

distinguishable coding the provided reference signal by spectral coding the reference signal.

8. A software program or product, preferably stored on a data carrier, for executing the method of one of the claims 1 when run on a data processing system such as a computer.

9. A measurement setup for determination of optical properties of a device under test in both directions in transmission and in reflection, comprising:

a coding device distinguishable coding at least two parts of a provided measurement signal,

feeding elements feeding the at least two parts into the device under test from both directions in transmission and in reflection,

receiving elements receiving the signals from both directions transmitted and reflected by the device under test, identifying at least the coded parts in the signals transmitted and reflected by the device under test, and analyzing at least the identified parts to determine at least one optical property of the device under test from both directions in transmission and in reflection.

10. The setup of claim 9,

wherein the coding device further comprises a switch sequentially feeding one part of the measurement signal into a first path entering the device under test from one direction and the other part of the measurement signal into a second

path entering the device under direction.

11. The setup of claims 9,

wherein the coding device further comprises a beam splitter splitting the measurement signal into at least two parts and a modulating device spectrally coding the at least two parts of the measurement signal by modulating the at least two parts with different frequency or amplitude modulations.